Carotid Artery Stenosis

Disclaimer

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South Eastern Melbourne PHN Carotid Artery Stenosis pathway
Background

About carotid artery stenosis

➢ Can be symptomatic or asymptomatic.
➢ Treatment of asymptomatic carotid artery stenosis is controversial and still being researched.
➢ Stroke risk in patients with asymptomatic carotid artery stenosis is 0.5% to 1% annually.
➢ The benefit of carotid endarterectomy in asymptomatic females is not proven.
➢ Carotid artery bruits are a poor predictor of carotid artery stenosis or stroke risk.

Red flags

• Transient ischaemic attack (TIA) in the last 48 hours
• Multiple or recurrent transient ischaemic attack episodes in the last 7 days
• Amaurosis fugax in the last 48 hours

Assessment

Practice Point

Arrange urgent carotid imaging if TIA
Arrange urgent carotid imaging and carotid endarterectomy (CEA) in all patients with a carotid TIA or minor stroke.

1. Assess for TIA and carotid artery symptoms.

Carotid artery symptoms

➢ Monocular blindness:
  o Usually a transient visual loss, which may be the only symptom of carotid artery disease
  o Usually rapid onset, brief duration < 10 minutes
➢ Dysphasia
➢ Unilateral motor and/or sensory symptoms affecting face and limbs

Note: Syncope and vertigo are not symptoms of carotid disease.

Vertebrobasilar artery symptoms (carotid imaging not indicated):

➢ Cortical blindness
➢ Diplopia
➢ Isolated homonymous hemianopia or quadrantanopia
➢ Bilateral motor and/or sensory symptoms affecting face and/or limbs
➢ Ataxia

2. Arrange investigations:

• Consider suitability for carotid endarterectomy before arranging investigations.

Suitability for carotid endarterectomy

➢ Patient must have symptoms of carotid stenosis. Imaging is not indicated if asymptomatic.
➢ Imaging is inappropriate if patient is too frail or too unwell to consider vascular surgery.
If symptomatic patient, complete investigations within 24 to 48 hours to reduce the risk of stroke:

- Urgent carotid duplex ultrasound
- FBE, electrolytes, urea, and creatinine, LFT, fasting lipids, INR if on warfarin, ECG

### Management

#### Symptomatic carotid artery stenosis

1. Arrange transfer to Emergency Department by ambulance for [immediate vascular surgery referral or admission](#) if:
   - transient ischaemic attack in the last 48 hours.
   - multiple or recurrent transient ischaemic attack episodes in the last 7 days.
   - amaurosis fugax in the last 48 hours.

2. If internal carotid stenosis is > 50% on imaging, with symptoms in the preceding 14 days, phone registrar or consultant to arrange [urgent vascular referral](#) within 2 weeks.

3. If internal carotid stenosis is > 50% on imaging, and symptoms occurred > 2 weeks ago, arrange [urgent or routine vascular referral](#).

4. If internal carotid stenosis is < 50% on imaging in a symptomatic patient, undertake 12-monthly carotid imaging surveillance.

5. If a carotid body tumour is detected, arrange [urgent or routine vascular referral](#).


#### Cardiovascular risk management

- Statin therapy
- Antiplatelet therapy
- Blood pressure control
- Lifestyle modification:
  - Smoking cessation
  - Limit alcohol
  - Weight control
  - Regular aerobic physical activity
  - Mediterranean diet
- Diabetes

#### Asymptomatic carotid artery stenosis

1. Refer patients with > 70% stenosis to a [vascular surgeon](#) for surveillance. Carotid endarterectomy may be beneficial in men with > 5 years life expectancy and > 70% stenosis, but the area is controversial.
Carotid endarterectomy

Considerations include:

➢ Age
➢ Low surgical risk (< 3% risk of major stroke or death)
➢ Medical fitness with > 5 years life expectancy
➢ Pre-occlusive disease (95 to 99% stenosis) which has a high stroke risk

Asymptomatic internal carotid stenoses < 70% on imaging and isolated external carotid artery stenoses do not require vascular surgery assessment.

2. Ensure aggressive cardiovascular risk management in all patients. See Clinical Guidelines for Stroke and TIA Management

Referral

• Arrange transfer to Emergency Department by ambulance for immediate vascular surgery referral or admission if:
  o transient ischaemic attack in the last 48 hours.
  o multiple or recurrent transient ischaemic attack episodes in the last 7 days.
  o amaurosis fugax in the last 48 hours.

• If internal carotid stenosis is > 50% on imaging, with symptoms in the preceding 14 days, phone registrar or consultant to arrange urgent vascular referral within 2 weeks.

• Arrange urgent or routine vascular referral if patient presents with:
  o internal carotid artery stenosis > 50% on imaging and symptoms that occurred > 2 weeks ago.
  o asymptomatic internal carotid artery stenosis > 70% on imaging.
  o carotid body tumour.

Information

For health professionals

Stroke Foundation – Inform Me

For patients

➢ Circulation Foundation – Carotid
➢ Heart Foundation – Lowering Your Risk of Heart Attack and Stroke
➢ Patient – Transient Ischaemic Attack

Sources

References


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